REMARKS/ARGUMENTS

Claims 45, 62, 63, 70, 71 and 72 have been amended to clarify that the acid treatment step is followed by separation step to remove internal soluble cell constituents. Support for this amendment is found in the specification, *e.g.* in the paragraph beginning on page 12, lines 2-6 ([following acid treatment] "the resulting suspension can be centrifuged or the like to separate the supernatant and yeast cell residue."). For support of the recitation "acidic aqueous solution," see *e.g.* page 36 of the specification, last paragraph. The amendments clarify the claims; they do not introduce new matter. Claims 1-44, 52-61 and 64-69 have been canceled. Claims 45-51, 62, 63 and 70-72 are currently under consideration.

The Office Action of July 13, 2005 rejects all of the present claims under 35 U.S.C. 102(e) as allegedly being anticipated by Wheatcroft *et al.* (U.S. pat. no. 6,444,448B1 (the "448 patent")). Applicants disagree with this rejection.

Present independent claims 45, 70, 71 and 72 are directed to a surface coating process wherein the coating agent is prepared by a process involving treatment with enzymes and subsequently with an acidic aqueous solution followed by a separation step to remove remaining internal soluble cell constituents. Two internal soluble cell constituent removal steps are implied. The product of the process contains glucan, mannan and chitosan. This product is mixed with water to form a coating solution. Then this solution is dried on a substrate and a layer with low oxygen or gas permeability is formed.

By contrast, the method of the '448 patent is not directed to a surface coating process. Rather, the process is directed primarily to the formation of a glucan-mannan adjuvant product that provides an immunostimulatory activity, *e.g.* a product to be added to feed components, or to be used as an immunostimulatoty, antihypercholesterolaemic, hypoglycaemic, or heavy metal excretion stimulating agent. See, *e.g.*, col. 5, last paragraph, of the cited patent. Other possible products are wished for but are not reduced to practice. There is clearly no disclosure of a procedure for preparing a coating agent comprising a step of acid treatment followed by a separation step. There is also no formation of a coating agent that comprises, as a primary constituent, the product formed by its process. There is not even a mention of a product having glucan, mannan and chitosan. The only characterized product is an adjuvant having mannan and glucan.

The method of the reference is not designed to create a substance that forms a "continuous, low oxygen or gas permeable coating on a solid material" as is recited in present claims 45, 70, 71 and 72. In fact, a product made by the '448 method does *not* exhibit this desired property.

Support that a product made by the method of the reference does not form a continuous, low oxygen or gas permeable coating on a solid material is provided by Examples 9 and 10 of the patent, which describe the use of a product made by a process of the patent in a coating for solid pellets (feed pellets for fish or shrimp). These Examples describe a coating in which a glucan-mannan product made by a method of the '448 patent is mixed with large amounts of gelatin. Examples 9 and 10 of the '448 patent disclose that, when used to form a coating, 0.1% of glucan-mannan is mixed with a solution of 5% gelatin (wt/wt). The ratio of glucan-mannan to gelatin in this preparation is only 1/50; the major component of the coating product is thus gelatin, which is well-known in the art as a coating for solid particles. The coating of the reference differs from the presently claimed coating agent, at least because the coating of the reference does not comprise "yeast cell wall fractions as a primary constituent," or a coating "consistently essentially of cell residue of yeast" (see, *e.g.*, instant claims 45, 70 and 72). Moreover, the coating in Examples 9 and 10 is added to improve the resistance to infection of fish (Example 9) or shrimp (Example 10). Such properties do not require that the coating form a continuous, low oxygen or gas permeable coating; and in fact, a product made by the method of the '448 patent does not exhibit this desirable property.

In the Office Action of July 13, 2005, the Examiner refers to claims 1, 3, 4, 8, 13 and 14 of the '448 reference. These claims do not disclose the use or preparation of a coating agent by a process comprising an acid treatment followed by a separation step to remove internal soluble cell constituents, as is recited in the instant claims. Moreover, claim 8 of the reference recites that a β-glucan-mannan preparation is subjected to acidification to a pH of about 2 to about 4. The specification of the '448 reference (*e.g.* at column 4, lines 53-60) indicates that the adjustment of pH is performed to improve the immunostimulatory potency of the β-glucan-mannan preparation; the reference does not identify an acidic treatment followed by a separation step to remove internal soluble cell constituents, under conditions which result in a coating that exhibits low permeability to oxygen or gas. Moreover, claim 14 of the '448 reference recites that the yeast preparation is used for the production of viscosity-imparting agents, emulsifiers, film

coating substances, supports for affinity chromatography or gel electrophoresis, cell culture medium, filter pad or cement. It is not clear that that these uses correlate with a yeast preparation that is suitable for a coating which exhibits low oxygen or gas permeability as is envisioned by the instant claims.

Furthermore, in the Office Action of July 13, 2005, the Examiner refers to Examples 1, 2 and 4 of the '448 reference. However, Examples 1 and 2 do not describe a method for preparing a coating agent or characterize the resultant product suggesting its suitability as an air impermeable coating. Moreover, Example 4 describes a method to improve the immunostimulatory potency of a β-glucan-mannan preparation by adjusting the pH of the preparation to 2 to 4. However, as noted above with regard to claim 8, the treatment of adjusting the pH of the preparation is performed under conditions to improve the immunostimulatory potency of the β -glucan-mannan preparation. This differs from the acidic treatment of the instant claims, which is performed to remove internal soluble cell constituents. The removal of soluble constituents following acid treatment is not mentioned in the '448 reference. Accordingly, it does not appear that Example 4 reasonably describes the instantly claimed method for preparing a coating agent.

Clearly, the '448 reference does not disclose all the elements of the claimed method (*e.g.*, treating with an aqueous acid solution followed by a separation step to remove internal soluble cell constituents). Furthermore, the method of the reference results in a product with very different properties from a product made by the claimed method (*e.g.*, the product of the reference does not form a continuous, low oxygen or gas permeable coating on a solid material to be coated, and the characterized product produced by the process of the reference does not contain chitin). Therefore, the reference does not anticipate the present claims, and should be withdrawn.

In view of the preceding arguments, it is believed that the application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,

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